REMARKS

This Amendment is in response to the Office Action of December 21, 2005. Applicants respectfully submit that all the claims presently on file are in condition for allowance or appeal. Applicants have amended the claims and canceled claims 11 without prejudice, to more clearly point out the present invention.

THE DRAWINGS

Figure 1 was objected to and the addition of a "Prior Art" legend was requested. Applicants respectfully submit that such a legend is not required, since Figure 1 illustrates the data writing system 10 of the present invention and thus it does not refer to a prior art system.

THE CLAIMS

REJECTION UNDER 325 USC 112

Claims 9-13 and 18 were rejected under 35 U.S.C. 112, second paragraph. Claim 11 has now been canceled without prejudice. Applicants respectfully respond to the Examiner's inquiry by stating that the conditional phrases that were objected to, form part of the claimed invention.

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REJECTION UNDER 325 USC 103

Claims 1-3, 19-21, and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,870,751 to Trotter (hereafter "Trotter"), in view of U.S. Patent No. 6,128,771 to Tock et al. (hereafter "Tock"). Claims 4-18, 22-25, and 29-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Trotter in view of Tock and U.S. Patent No. 5,016,221 issued to Hamstra (hereafter "Hamstra").

Applicants respectfully submit that the cited references do not disclose all the elements and limitations of the claims on file as a whole. Consequently, the claims on file are not obvious under 35 U.S.C. 103, and the allowance of these claims is earnestly solicited. The allowability of the rejected claims will now be discussed in view of representative claim 1.

Applicants agree with the Examiner that "Trotter does not explicitly disclose: transferring the records in the linked list and the new record from the in-memory database to the disk database using the header data structure", and further that "Trotter in view of Tock do not disclose: wherein the header data structure further comprises a last commit pointer."

The Examiner further indicates that: "On the other hand, Hamstra discloses: wherein the header data structure further comprises a last commit pointer (Hamstra: col. 4, lns. 7-17 – Hamstra discloses the <commit pointer> which corresponds to a last commit pointer)."

Applicants respectfully submit that neither of the cited references, whether taken individually or in combination with each other, discloses that <u>the transfer of the records is implemented in blocks of records as a single transaction to the disk database, in order to minimize the number of transfers from the in-memory database to the disk database.</u> As a result, the present method shortens the lag time by reducing the number of transactions required to transfer data from in-memory database to disk memory. <u>The present method does not write a complete transaction for each record.</u> The overhead required for transactions can be quite large, and the performance is enhanced by minimizing the number of transactions performed.

In addition, Applicants respectfully submit that, contrary to the present invention, neither reference discloses the <u>dynamic setting a last commit pointer and a last flush pointer to keep track of: (i) a block of records that have been transferred to the disk database but not yet committed; (ii) a block of records that have not been transferred to the disk database; and (iii) a block of records that have been transferred and committed to the disk database, in order to maintain synchronization between the in-memory database and the disk database.</u>

As a result, the present method compiles into the RDBMS knowledge about the structure of the in-memory database and then uses end of transaction callbacks from the RDBMS to keep the two databases synchronized. More specifically, **Applicants respectfully traverse the characterization of Hamstra's commit pointer as a last commit pointer** as recited in claim 1 and as explained in the instant specification.

The last commit pointer and the last flush pointer, as explained in the instant specification, define the <u>block of records that have been transferred to the disk database but not yet committed</u>. The commit pointer of Hamstra does not perform such a function, nor does it allow the determination of <u>whether a committing operation of the block of records that have been transferred to the disk database but not yet committed is successful, and if the committing operation is determined to be unsuccessful, deeming the committing operation of all the records in the block of records that have been transferred to the disk database but not yet committed is successful, to have failed</u>.

As a result, Applicants respectfully submit that **none of the prior art references considers the present invention as a whole**, and the hypothetical combination of <u>these references will not consider the present invention as a whole</u>, necessitating the finding of non-compliance with the foregoing legal standard. Reference is made to the following legal authority in support of the finding of non-obviousness:

> **"In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is** not whether the differences themselves would have been obvious, but **whether the claimed invention as a whole would have been obvious**. The prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one-piece gapless support structure. "Because that insight was contrary to the understandings and expectations of the art, the structure effectuating it would not have been obvious to those skilled in the art." 713 F.2d at 785, 218 USPQ at 700."

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In support of the combination of the references, the Examiner states as follows:

> "It would have been obvious to a person having ordinary skill in the art at the time of invention to combine the transferring information of Tock and the listed link of Trotter into the first-in and out memory configuration of Hamstra to utilize a read pointer and a commit pointer. Skilled artisan would have been motivated to incorporate the Tock's teaching of transferring information and the Trotter's linked list system in the first-in and out memory configuration of Hamstra to · improve the process of in-memory records as suggested by Hamstra, which discloses "the faster a processor can examine its received instructions and/or data and determine whether they are to be retained for use or discarded, the faster the processor can accept and process new instructions and/or data" (Hamstra: col. 2, lns. 1-9). Claims 22 and 29 are rejected based upon the same reasoning as Claim 4."

Applicants respectfully submit that Hamstra **does not provide any teaching or suggestion** to support modifying the Trotter/Tock combination design (1) to transfer the records includes transferring blocks of records as a single transaction to the disk database ... (2) to dynamically set a last commit pointer and a last flush pointer to keep track of the three different blocks of records, in order to maintain synchronization between the in-memory database and the disk database ... and (3) to determine whether the committing operation has been successful, and <u>if the committing operation is determined to be unsuccessful, deeming the committing operation of all the records in the block of records that have been transferred to the disk database but not yet committed is successful, to have failed</u>, as recited in claim 1.

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The Examiner provided a general reason for the desirability of the combination of the references, in hindsight, without referring to any substantive (or significant) teaching or suggestion in Hamstra in support of such combination. More specifically, the reason provided by the Examiner is generic and insufficiently specific.

As a result, The Examiner has not met the *prima facie* burden of supporting the obviousness rejection under 35 USC 103, and the hypothetical combination of the cited references cannot be used to support a finding of obviousness, as indicated by the legal authorities below:

> "**Obviousness cannot be established** by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion** supporting the combination." *In re Fine, 837 F.2d at 1075, 5 USPQ2d at 1598* (citing *ACS Hosp. Sys. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)*). **What a reference teaches** and whether it teaches toward or **away from the claimed invention** are questions of fact. See *Raytheon Co. v. Roper Corp., 724 F.2d 951, 960-61, 220 USPQ 592, 599-600 (Fed. Cir. 1983)*, cert. denied, 469 U.S. 835, 83 L. Ed. 2d 69, 105 S. Ct. 127 (1984)."

> "When a rejection depends on a combination of prior art references, there must be **some teaching, suggestion, or motivation** to combine the references. See *In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).*" Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention **where there is some teaching, suggestion, or motivation** to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP 2143.01; *In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).*"

In addition, Applicants reiterate that Hamstra's commit pointer is clearly distinct from the present last commit pointer and furthermore, <u>the read point referred to by the Examiner cannot be analogized to the last flush pointer of the present invention</u>. As explained in the instant specification, the "last flush pointer 320 points to a last record written to disk memory 215 whose transfer has not been committed." On the other hand, the read pointer referred to by the Examiner does not perform a similar function.

Claim 1 is thus not obvious in view of the cited references, and the allowance of this claim and the claims dependent thereon, is earnestly solicited. Independent claims 19 and 26 are allowable for containing a similar subject matter to that of claim 1. Therefore, claims 19 and 26 and the claims dependent thereon, are also allowable.

CONCLUSION

All the claims presently on file in the present application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned at the below-listed telephone number.

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Respectfully submitted,

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